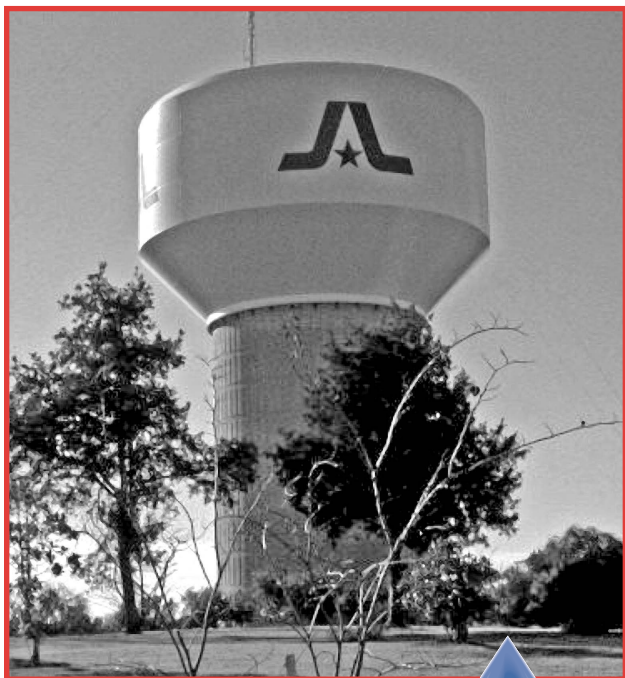


# DRINKING WATER QUALITY REPORT

City of Arlington

2004



Arlington Water Utilities is again proud to report that your water is safe to drink. Our employees take great pride in producing and delivering to you, our customer, water that meets all Federal and State regulations. Again this year, no water quality regulations were violated and in most instances parameters found in Arlington water are well below the maximum allowable levels. The information included in this report reflects the data collected from January 1 through December 31, 2004, unless noted otherwise

Este reporte incluye información importante sobre el agua potable. Para ayuda en español, favor de llamar al teléfono 817-457-7550 y pregunte por Erik Irwin.

Published May 2005

## The Environmental Protection Agency (EPA) Safe Drinking Water Hotline

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that water poses a health risk. The City of Arlington participated in gathering data under the Unregulated Contaminant Monitoring Rule data collection (UCMR) in order to assist EPA in determining the occurrence of possible drinking water contaminants. If any unregulated contaminants were detected, they are shown in the tables elsewhere in this report. This data may also be found on EPA's web site at <http://www.epa.gov/safewater/data/ncod.html>, or you can call the Safe Drinking Water Hotline at 1-800-426-4791. In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The United States Food and Drug Administration regulates the bottled water industry for the same contaminants. The treatment process removes contaminants from the raw water and provides further protection prior to sending it to the distribution system.

## For more information:

**Water Quality Information:** .....817-457-7550  
*Laboratory Services water sample requests, water quality questions or water quality problems. If you have questions concerning this brochure, ask for Mark Eley in the laboratory.*

**Customer Services Information:** .....817-275-5931  
*Open new or transfer account, billing inquiries, water conservation, water and sewer rates.*

**Emergency Water and  
Sewer Services (24 hours):** .....817-459-5900  
*Service interruptions, water leaks, sewer problems*

**Tarrant Regional Water District (TRWD):** ...817-237-8585

**Texas Commission  
on Environmental Quality (TCEQ):** .....512-239-1000

To participate in decisions concerning water: Attend the Arlington City Council meetings which are held every 2<sup>nd</sup> and 4<sup>th</sup> Tuesday night at 6:30 P.M. in the Council Chambers located at City Hall, 101 West Abram Street.



[www.ci.arlington.tx.us/water/](http://www.ci.arlington.tx.us/water/)

# 2004 Drinking Water Quality Report

## Questions and Answers about Arlington Drinking Water

- Q.** Where does Arlington Drinking Water come from?
- A.** Arlington purchases its water for treatment from the Tarrant Regional Water District. The water is taken from four reservoirs. Cedar Creek, Richland Chambers and Lake Benbrook supply the John Kubala Water Treatment Plant. Lake Arlington supplies the Pierce-Burch Water Treatment Plant.
- Q.** Has a Source Water Susceptibility Awareness (SWSA) study been completed on each one of the reservoirs that Arlington receives water from?
- A.** **Yes. A SWSA for each reservoir was completed by the Texas Commission on Environmental Quality (TCEQ). The SWSA lists the sources of possible contamination and the possible level of their severity, for each reservoir. After completing this study the TCEQ sent copies of their findings to the City of Arlington Water Department. The findings revealed that each of the reservoirs mentioned above did have some level of susceptibility to possible contamination. For additional information or questions regarding the most recent SWSA please contact the drinking water laboratory at (817)457-7550. SWSA for the reservoirs listed above are also available from the TCEQ at 512-239-1000.**
- Q.** Is Arlington water safe to drink?
- A.** Absolutely. Again this year, no water quality regulations were violated and in most instances parameters found in Arlington water are well below the maximum allowable levels. Our employees take great pride in producing and delivering to you, our customer, water that meets all Federal and State regulations.
- Q.** How is the water in Arlington treated?
- A.** The water in Arlington is treated at two state of the art water treatment plants. Ozone is used as the primary disinfectant. Aluminum sulfate and a cationic polymer are added to help dirt and other particles clump together and settle out during treatment. The water is then filtered through granular activated carbon beds to remove smaller particles and substances that are dissolved in the water. The water is then chloraminated (treated with chlorine and then ammonia) as it enters the clearwell for storage. Chloramine is the secondary disinfectant that keeps the water safe on its way to your faucet.
- Q.** I am undergoing chemotherapy for cancer. Is the water still okay for me to drink?
- A.** **You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or Immuno-compromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids and people with HIV/AIDS or other immune system disorders can be particularly at risk from infec-**

**tions. You should seek advice about drinking water from your health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800-426-4791).**

- Q.** What type of contaminants might be in my water?
- A.** The City of Arlington and the State of Texas both analyze your drinking water for contaminants. Any that were detected during the last year are shown in Table A. As shown in the table all are well below the established maximum contaminant levels. All water dissolves substances from the ground as it flows over and through it. Substances that may be present in raw water include such things as 1) microbial contaminants such as viruses and bacteria that come from septic systems, agricultural livestock operations and wildlife; 2) salts and metals that can be naturally occurring or the result of urban storm water runoff, industrial or domestic wastewater discharges or farming; 3) pesticides and herbicides that may come from a variety of sources such as agriculture, urban storm water runoff or residential uses; 4) organic chemical contaminants that include synthetic and volatile organic chemicals that are by-products of industrial processes and can also come from gas stations and urban storm water runoff; 5) radioactive contaminants that are naturally occurring. Substances may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on these problems please call Laboratory Services at 817-457-7550.

**T**he Utility receives calls from customers concerning white particles or things that look like white pieces of paper clogging plumbing fixtures. These are most probably one of two things.

1. They may be bits of calcium carbonate scale coming from your water heater. This scaling may be worsened because the water heater thermostat is set too high. Most manufacturers recommend it to be set about 120 degrees. If the particles are calcium carbonate, you probably need to flush your water heater. Most manufacturers recommend that you do this twice per year.
2. They may also be small pieces of plastic for the dip tube in your water heater. The dip tube transports the cold water to the bottom of the tank to be heated. Some dip tubes were made of unsuitable plastic.

For guidance in flushing your hot water heater, analysis of these particles, or other water quality concerns please contact laboratory services at 817-457-7550.

# Definitions to help you understand the tables

**Action Level (AL)** .....The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**<(xxx)** .....less than the amount listed.

**≥(xxx)** .....equal to or greater than the amount listed.

## Maximum Contaminant

**Level Goal (MCLG)** .....The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

## Maximum Contaminant

**Level (MCL)** .....The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

## Maximum Residual Disinfectant

**Level Goal (MRDLG)** .....The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

## Maximum Residual

**Disinfectant Level (MRDL)** .....The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**NA** .....Not applicable

**ND (Not detected)** .....No level of the parameter was detected.

## NTU (Nephelometric

**Turbidity Units)** .....A unit used when measuring turbidity, a measure of the cloudiness of the water.

**pCi/L (picocuries per Liter)** .....A measure of radioactivity in the water.

**ppb (parts per billion, ug/L)** .....A unit of measurement roughly equal to 1 drop in 100,000 gallons.

**ppm (parts per million, mg/L)** .....A unit of measurement roughly equal to 1 drop in 100 gallons.

**TT (Treatment technique)** .....A required process intended to reduce the level of a contaminant in drinking water.

# Other Substances of Interest

Substance	Units	MCLG	Average	Range
Total Alkalinity	ppm	NA	109	109-110
Total Hardness	ppm	NA	110	82-150
Total Hardness	grains/gallon	NA	6.5	4.8-8.8
Calcium	ppm	NA	35	19-74
Sodium	ppm	NA	22	20-25
Chloride	ppm	250	22	17-27
Sulfate	ppm	250	41	39-43

## Disinfection By-Products

Substance	Units	Average of all Sampling points	Range
<b>Chloroform</b>	ppb	1.5	ND-2.0
<b>Bromodichloromethane</b>	ppb	1.8	ND-2.1
<b>Chlorodibromomethane</b>	ppb	2.4	2.1-2.8
<b>Bromoform</b>	ppb	< 0.5	ND-0.6

Each of the above four substances are not currently regulated by themselves. However, EPA does regulate them as part of a group of substances called Trihalomethanes. See Table A, Organic Contaminants.

<b>Dichloroacetic Acid</b>	ppb	3.0	1.4-4.4
<b>Trichloroacetic Acid</b>	ppb	<1.0	ND-<1.0
<b>Dibromoacetic Acid</b>	ppb	1.8	1.6-2.1

Each of the above three substances are not currently regulated by themselves. However, EPA does regulate them as part of a group of substances called Haloacetic Acids. See Table A, Organic Contaminants.

## Information Collection Rule Results from July 1997 through December 1998

Substance	Units	Average of all Sampling Points	Range
Cyanogen Chloride	ppb	6	3-10.3
Total Organic Halides	ppm	0.2	0.1-0.5

The Information Collection Rule was published in the Federal Register in May, 1996. The rule was intended to provide EPA with an idea of what disinfection by-products were found, how often and at what levels. The EPA then intended to use this data along with health effects data and treatment technology research to determine the best way to control microbial contaminants while still minimizing the formation of disinfection by-products. One way to accomplish this is to use ozone as a disinfectant during the water treatment process as we do in Arlington. As can be seen in the chart above, it is a good way to minimize the formation of many disinfection by-products

# Table A

Substances that are regulated or are required to be monitored and were detected in Arlington tap water in 2004.  
None of the detected substances exceeded the regulated limits.

Inorganic contaminants						Organic contaminants					
Substance	Units	MCL	MCLG	Highest Level	Range	Substance	Units	MCL	MCLG	Highest Level	Range
<b>Barium (2002)</b>	ppm	2	2	0.046	0.044-0.046	<b>Atrazine</b>	ppb	3	3	0.26	0.14-0.26
Possible source of substance: Erosion of natural deposits						Possible source of substance: Runoff from herbicide used on row crops <a href="#">Average of all sampling points.</a>					
<b>Fluoride</b>	ppm	4	4	0.8	0.39-0.8	<b>Total Trihalomethanes</b>	ppb	80	NA	5.1	3.8-5.1
Possible source of substance: Water additive promoting strong teeth						Possible source of substance: By-product of drinking water chlorination <a href="#">Compliance based on a calculated running annual average of all samples at all sites.</a>					
<b>Nitrate as Nitrogen</b>	ppm	10	10	0.68	0.34-0.68	<b>Haloacetic Acids (HAA5)</b>	ppb	60	NA		
Possible source of substance: Runoff from fertilizers						Running annual average range: 4.5 Highest running annual average: 5.2					
<b>Nitrite as Nitrogen (1999)</b>	ppm	1	1	0.01	0.01	Possible source of substance: By-product of drinking water disinfection <a href="#">Compliance based on a calculated running annual average of all samples at all sites.</a>					
Possible source of substance: Runoff from fertilizers						<b>Chloramines</b>	ppm	MRDL=4	MRDLG=4		
		No. of Sites Exceeding		90th Percentile		Running annual average range: 3.6-3.7 Highest running annual average: 3.7					
Substance	Units	Action Level	Action Level	90th Percentile	Range	Possible source of substance: Water additive used to control microbes <a href="#">Compliance based on a calculated running annual average of all samples at all sites.</a>					
<b>Lead (2003)<sup>1</sup></b>	ppb	AL=15	0	2.5	ND-6.9	<b>Total Organic Carbon PB Plant</b>	TT=% removal	≥ 1.0			
Possible source of substance: Corrosion of household plumbing systems.						Running annual average range: 1.0-1.1 Highest running annual average: 1.1					
<b>Copper (2003)<sup>1</sup></b>	ppm	AL=1.3	0	.25	0.016-0.407	<b>Total Organic Carbon JK Plant</b>	TT=% removal	≥ 1.0			
Possible source of substance: Corrosion of household plumbing systems						Running annual average range: 1.05-1.12 Highest running annual average: 1.12					
Instead of MCLs for lead and copper, EPA requires that 90 percent of water samples obtained from customer's taps contain less than the Action Level for each metal.						Possible source of substance: Naturally present in the environment <a href="#">Compliance is based on a calculated running annual average from each plant</a>					
Arlington's most recent survey of the required 50 homes not only met this requirement but showed that none of the homes exceeded the action levels. This means that Arlington's water is significantly better than required.											
<sup>1</sup> Sampling is required every 3 years.											

Radioactive contaminants						Clarity (combined filter effluent turbidity)					
Substance (2002*)	Units	MCL	MCLG	Highest Level	Range	Substance	Units	MCL	MCLG	Highest Level /Avg.	Range
<b>Radium 228</b>	pCi/L	5	NA	<1.0	<1.0	<b>Highest single turbidity measurement</b>	NTU	TT=1.0	0	0.30/0.10	0.04-0.3
Possible source of substance: Decay of natural and man-made deposits						Possible source of substance: Soil runoff					
<b>Beta/Photon Emitters</b>	pCi/L	50	NA	<4.0	<4.0	<b>Percentage of samples less than 0.3 NTU</b>	%	TT=95%		99.96%	NA
Possible source of substance: Decay of natural and man-made deposits						<a href="#">Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.</a>					
<b>Gross Alph Particle Activity</b>	pCi/L	15	NA	<2.0	<2.0						
Possible source of substance: Decay of natural and man-made deposits											
<i>*Sampling is required every 3 years.</i>											

Microbiological contaminants						Possible source of substance: Naturally present in the environment, coliform bacteria are used as indicators of microbial contamination of drinking water because they are easily detected and found in the digestive tract of warm blooded animals. While not themselves disease producers, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms. Therefore their absence from water is a good indication that the water is bacteriologically safe for human consumption.					
Substance	Units	MCL	MCLG	Highest Level	Range						
<b>Total Coliform</b>	%	*	N/A	**	ND-1.08%						
*MCL: Presence of coliform bacteria in 5% or more of the monthly samples											
**Highest Level: The highest monthly percent of positive sample = 1.08%											